THE IMPACT OF POLITICAL EVENTS ON THE KWACHA: A FOCUS ON ELECTIONS

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By

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PLAGIARISM DECLARATION

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ABSTRACT

Political events can be described as events that affect a country's economic and regulatory environment. Such events may include changes in monetary and fiscal policy, changes in trade and foreign policy, cabinet reshuffles and changes in government. In emerging markets, political events can affect asset prices because of the impact they can have on foreign sentiment and investor confidence. Elections in particular can cause considerable uncertainty which can lead to herding behavior by investors, if outcomes do not reflect prior predictions. Unfavorable election results can lead to currency depreciation, stock market crashes and economic deterioration as investors change their expectations and demand higher premiums due to the perceived increase in sovereign as well as currency risk.

This research focuses specifically on the effect of presidential elections on the exchange rate between U.S. Dollar and Zambian Kwacha. The study employs the event study methodology by dividing elections into two periods and these are; a month leading to the election and another month after the elections. The study will examine three distinct presidential elections that occurred in Zambia in 2011, 2015 and 2016 respectively. The research uses daily time series data for the periods September 2011, January 2015 and August 2016. The methodology makes use of the currency pair's daily mid-rate as inputs to the market model. The market model was used to calculate average abnormal returns and cumulative average abnormal returns. Test of significance was conducted using t-test with 5 percent level of significance using a two-tailed test. The results of the t-test show that political events represented by the presidential elections had a statistically significant effect on the Kwacha, with noteworthy observations concentrated around the days following the event. The study recommends that key policy makers and stakeholders should place more emphasis in ensuring a healthy and safe political environment in the country. Investors should also be cautioned against viewing emerging markets as one homogenous group. The results in this study are unique to Zambia, which has had a history of holding peaceful (and arguably), free and fair elections since becoming a multi-party democracy in 1991.

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ABBREVIATIONS

1. AAR – Average Abnormal Returns
2. AR - Abnormal Returns
3. CAR - Cumulative Abnormal Returns
4. FDI - Foreign Direct Investment
5. GARCH - Generalized Autoregressive Conditional Heteroskedasticity
6. GBP - Great Britain Pound
7. S.P.S.S. - Statistical Package for Social Sciences
8. USD - United States Dollar
9. ZMW - Zambian Kwacha
10. IFE - International Fisher Effect
11. CAPM – Capital Asset Pricing Model
12. ART – Arbitrage Pricing Theory
13. CAAR - Cumulative Average Abnormal Return
14. PF – The Patriotic Front
15. MMD - The Movement for Multi-Party Democracy

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1 CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

A stable currency is a currency which successfully performs its functions as a means of exchange, unit of account and a store of value because its purchasing power is stable. This entails that when a currency is stable, it can in the short and long term, translate into overall health of an economy (Kalinowski, 2011: 52).

However, there are various factors which influence the stability of a currency such as interest rates, current account deficit, terms of trade, inflation, exchange rates and political stability (Khalwaty, 2000). The exchange rate is considered to be a key determinant of a country's relative level of economic health. Political stability encourages foreign investors to pursue growth opportunities in developing countries with strong economic performance. Any country with long term growth prospects, a stable political environment and the right demographics will draw investment funds away from other countries with high political and economic risk. Political instability and market disruption resulting from elections can affect investor sentiments. Negative investor sentiments can lead to an increase in exchange rate volatility and capital flight.

According to Purdy (2016), uncertainty before an election can cause currency markets to experience increased volatility. He analysed the 2016 presidential elections in the United States as well as the European Union referendum in Britain before they took place and predicted that the United States Dollar would weaken against the British Pound. This is a good example of how investors behave and make decisions in the face of political events. It is therefore important to have adequate information based on credible research before making investment decisions. Hence, this study aims to contribute to the existing financial literature on political risk.

The main motivation behind this research is drawn from the fact that Africa has a bad reputation when it comes to democracy and good governance. It appears as though most African politicians do not fully appreciate the gravity of how political events, especially uncertainty surrounding elections, can affect the stability of a currency and overall health of an economy. Therefore, it is important to note that a nation’s economic fortunes can deteriorate quite rapidly

as a result of unfavourable election outcomes. If a political event such as an election is not well managed, the negative fallout can be catastrophic leading to civil unrest, economic recession and currency devaluation. This study is specifically focussed on how political events affect foreign exchange markets. The research explores the impact of presidential elections on the Zambian currency market. Unlike previous studies which have focused on the relationship between political events and stock market returns, this study seeks to develop a more nuanced approach by studying the relationship between political events and the stability of a national currency from an emerging market perspective. Understanding the potential linkage between currency markets and elections is important not only for developing sound and independent institutions from a governance perspective, but also for developing risk management strategies for investments.

The impetus to undertake this study stemmed from the lack of similar studies, and an intellectual curiosity to try and develop a framework to assess how political events in general and elections in particular influence movements in the USD/ZMW currency pair. The study is also aimed at helping policy makers and regulators come up with adequate measures and implement sound institutional safeguards during elections. The research is an in-depth study on how political events affect exchange rates, particularly during elections, with a specific focus on the capital and financial markets in Zambia. This study uses a holistic approach, covering both the governance and policy perspective as well as the important considerations from an investment and risk management perspective.

1.2 Problem Statement

Investors and researchers view political risk as an influential factor in asset pricing. Doing an analysis on emerging markets is important because these economies have been gaining prominence in international finance and trade mainly because they offer unique opportunities for institutional investors in more developed markets. However foreign participation does expose emerging markets to high levels of exchange rate volatility during periods of global financial market stress or when investors re-price for risk. Rising exchange rate volatility may hurt the economy through its adverse effects on inflation, trade, portfolio flows, as well as foreign direct investment (FDI). The exposure of emerging markets to a mix of exogenous shocks is also important in the structure of monetary policy design.

As earlier alluded to, foreign investors depend on indicators such as exchange rates in order to make investment decisions. However, Zambia over the past 3 years has experienced significant currency depreciation like most commodity driven economies. This means that both domestic and foreign investors have seen the value of their assets reduce both in real terms and in US Dollar terms. It goes without saying that investors consider political events to be a major factor when making valuations and investment decisions, especially in emerging markets. It is therefore cardinal to ensure that an analysis is done to demonstrate how political events can affect the risk and return dynamics for both domestic and foreign investors in emerging markets.

Early studies have looked at how political events affect stock market returns. There is also available literature on factors that affect exchange rates which have produced results that are not consistent with each other. However, very few scholars have looked at how political events affect exchange rates in an emerging economy such as Zambia. The study focuses on Zambia, an emerging market economy. Most of the conventional economic research employs event study methodology using data from advanced economies. Mpofu and Peter (2016) discovered that there are a few studies that use the event study approach using data from South Africa and Africa at large. According to them, research available mostly focus only on stock prices.

1.3 Research Question

Based on the statement of research problem, this study aims to answer the following key research question: How do presidential elections affect the stability of the Kwacha in relation to the U.S dollars?

1.4 Research Objective

The objective of this research study is to investigate the effect of political events on the fluctuations in the Zambian Kwacha. The specific objective is;

i. To examine the effect of the presidential elections on the exchange rate between the Zambian Kwacha and the U.S. dollars.

1.4 Significance of the Research

Exchange rates are often used to gauge a country's relative level of economic health for a country that is heavily dependent on copper such as Zambia, the exchange rate is seen as a reflection of the degree of economic stability. Therefore the USD/ZMW exchange rate should be monitored and analysed regularly by investors, policy makers and regulators. Generally speaking, exchange rate movements have been a topic of discussion in various theoretical and empirical literatures on both advanced and less developed economies. However, the political factors that may affect exchange rates are seldom addressed in detail.

As mentioned earlier one of the key reasons for undertaking this research is because the Zambian economy, like many other emerging markets is heavily dependent on commodities as a means of earning foreign exchange. As Africa's second largest copper producer, Zambia's dependence on copper and the lack of economic diversification has serious consequences for the country's balance of payments and current account. This means that the country's exchange rate is largely driven by copper prices which poses significant risks to the country's economic growth and sustainability. With a weak currency, current account deficits are likely to persist in the long term especially in Zambia's case where the economy is heavily dependent on a single commodity to earn foreign exchange. A weak currency also affects the overall economic health of the nation, mainly because the country is a net importer of other essential commodities including oil and electricity.

This study aims to contribute to the academic literature by analysing how important political events can affect exchange rates in an emerging market such as Zambia. This study will be the first of its kind in a Zambian context and will allow other scholars to perform further research and analysis on the subject matter. The knowledge of the relevant political factors that have an influence on currency risk is cardinal to investors, policy makers and regulators. By understanding the causes and effects, portfolio managers will be in a better position to calculate their return of investments as well as to choose the appropriate risk management strategies during such events. Government officials and regulators will also be in a better position to develop and implement policies that will foster economic growth and attract more foreign investment.

1.5 Research Assumptions

Research Hypotheses

Applying some of the general findings in the literature and noting the inconsistencies, this study hypothesises the following:

Significant abnormal returns around an election period is prevalent. The nature of the impact of political events is related to the period surrounding an election.

1.6 Organization of the study

This chapter has been an introductory section showing the importance of the study. The chapter provided a background on the topic at hand as well as key definitions. Implications for policy makers, investors and key stakeholders have also been tackled in this section.

The author hypothesises that there is a relationship between political events such as elections and the strength of the local currency, the Kwacha. In an attempt to expand and prove this hypothesis, an event study methodology shall be used as employed by past literature. The following chapters of this study will be designed as follows: Chapter two will give an overview of the relationship between elections in Zambia and the U.S Dollar and Kwacha exchange rate. Chapter three will give a detailed literature review by using both theoretical and empirical literature. Chapter four will detail what the event study methodology is all about as well as providing necessary formulas and instruments that were used to analyse the date as well as come up with findings. The results and interpretation will follow in Chapter five, after which the report will close with recommendations and conclusion of the results in Chapter six.

2 CHAPTER TWO:
AN OVERVIEW OF ELECTIONS AND US DOLLAR - KWACHA EXCAHNGE RATE IN ZAMBIA

2.1 Introduction

In order to understand the relationship between elections in Zambia and the USD/ZMW currency pair, the chapter will look at the history of elections in the country and how the local foreign exchange market reacted to election uncertainty and heightened political risk.

2.2 The History of Elections in Zambia

According to Simutanyi et al (1997:13) elections in Zambia have generally been free and fair since 1991 and Zambians have shown tremendous growth in terms of understanding the consequences of casting their votes in both local and national elections. Overall, elections in Zambia have been peaceful, however, the most recent presidential elections of August 2016 were marred by violence with a few street clashes between the ruling party and opposition cadres. Despite this, Zambia's record of peaceful transitions of power has seen the country continue to be a democratic model in Africa as reported by the Financial Express (2016).

The table below gives a summary of presidential elections in Zambia since independence in 1964 up to 2016. There has been a total of six Presidents during this period.

Table: 2.0: Summary of Presidential Election statistics in Zambia

Date	Type of Election	No. of candidates	Winning Party	Winner	Vote %
1/21/1964	Legislative Council	4	UNIP	Kenneth Kaunda	69.06
12/19/1968	Presidential	2	UNIP	Kenneth Kaunda	81.82
12/5/1973	Presidential	Unopposed	UNIP	Kenneth Kaunda	88.83
12/12/1978	Presidential	Unopposed	UNIP	Kenneth Kaunda	80.74
10/27/1983	Presidential	Unopposed	UNIP	Kenneth Kaunda	80.74
10/26/1988	Presidential	Unopposed	UNIP	Kenneth Kaunda	95.48
10/31/1991	Presidential	2	MMD	Fredrick Chiluba	75.8

11/18/1996	Presidential	5	MMD	Fredrick Chiluba	72.59
12/27/2001	Presidential	11	MMD	Levy Mwanawasa	29.15
9/28/2006	Presidential	5	MMD	Levy Mwanawasa	42.98
10/30/2008	Presidential	4	MMD	Rupiah Banda	40.63
9/20/2011	Presidential	10	PF	Micheal Sata	41.98
1/20/2015	Presidential	11	PF	Edgar Lungu	48.33
8/11/2016	Presidential	9	PF	Edgar Lungu	50.35

Source: Electoral Commission of Zambia (2016)

2.3 The Evolution of the Exchange Rate between Zambian Kwacha and US Dollar

Exchange rates can be defined as number of units of one currency that are exchangeable for a unit of another currency. Exchange rates constitute a very cardinal component of global economy which supports the international transaction between corporates, nation states and individuals. Exchange rates measure the value of one currency against the other. It is considered very important by respective governments, banks and other financial institutions which are involved extensively into the international scale businesses (Kreinin, 1983).

Several factors could cause exchange rate changes. These include changes in foreign exchange supply and demand, balance of payments problems, rising inflation, interest rate, national income, monetary supervision, changing expectations and speculation (Khalwaty, 2000). In linking exchange rate changes with changes in interest and inflation rates, the international Fisher effect (IFE) theory states that the future spot rate of exchange can be determined from nominal interest differential. The differences in anticipated inflation that are embedded in the nominal interest rates are expected to affect the future spot rate of exchange (Sundqvist, 2002).

From the time Zambia got its independence, the country has experienced various phases in its exchange rate policy. Shortly after independence in 1964, the country's currency which was known as Zambian Pound was fixed to the British Pound Sterling. However, in 1968 the Kwacha was introduced to replace the Zambian pound as the domestic currency. From 1971, as the Dollar was emerging as the only reserve currency under the Bretton Woods system, fixing

of the exchange rate of the Kwacha was switched from the British pound to the US Dollar (Mungule, 2004).

The Kwacha remained fixed to the US Dollar until 1976 when the government changed policy in order to peg it to the Special Drawing Rights (SDR). The move was perceived to be a form of controlled floating management of the exchange rate. Pegging of local currency to the SDR was replaced by a crawling peg to a basket of currencies of Zambia's major trading partners in 1985. The Kwacha was devalued in a controlled manner at speed of one percent each month during this exchange rate regime. However, this led to dissatisfaction in the sense that the country experienced continuous depreciation of the Kwacha and inefficiencies in manual allocation. A foreign exchange auction system was introduced in October, 1985 (Elbadawi and Aron, 1992).

A more flexible exchange rate regime was adopted in early 1990s as the process of economic reforms gained momentum. The decision to choose each of these exchange rate regimes was largely influenced by conventional economic and political arguments. A fixed exchange rate was sustained by official ruling reflected in occasional adjustments of the exchange rate and administrative controls such as issuance of import licenses as opposed to official interventions in the foreign exchange market (Mkenda, 2001).

Table 2.1: Summary of Exchange Rate Episodes in Zambia

Period	**Type of Policy**
1964-1971	Foreign exchange rate fixed to British Pound
1971-1976	Foreign exchange rate fixed to the US Dollar
1976-1983	Kwacha pegged to the SDR with periodic devaluations
1983-1985	Crawling peg to a basket of major trading partners' currencies
1985-1987	Foreign exchange auctions
1987-1989	Fixed to the US dollar with occasional devaluations
1990-1991	Dual exchange rate regime
1991 to date	Freely Floating exchange rate system

Source: Adopted from Mungule (2004) and Elbadawi and Aron (1992)

According to Obstfeld and Rogoff (2000), governments are usually conflicted between the need to abandon their fixed exchange rate and their need to defend the exchange rate. For this reason, Mei and Guo (2002) highlighted that governments often want to depreciate their currencies due to high unemployment and large domestic debt problems. Because of this, the government may be forced into taking on a different monetary policy and thereby getting rid of the fixed rate.

2.4 The Relationship between Exchange Rate and Elections in Zambia

Academic literature on the behaviour of the local foreign exchange market during elections in Zambia is hard to come by. However, scholars such as Shapiro (1974), Dumas (1978) and Choi & Rajan (1997) have found a significant relationship between exchange rates and the stock market, with their findings indicating that exchange rates have a significant effect on the movements in company cash flows and market valuations. In a similar light, Ma and Kao (1990) found that exchange rates are key elements in determining equity prices and profitability of a business.

Zambia has a floating exchange rate regime, where market demand and supply dynamics are vital determinants for foreign currency trading. Intervention by the Central Bank in the foreign exchange market is fairly insignificant, although maintaining price stability is at the core of the Central Bank's regulatory mandate. According to the International Monetary Fund (2015), macroeconomic stability over the last decade has been achieved satisfactorily in Zambia. However, due to various factors such as large fiscal imbalances, low copper prices and political uncertainty, the currency has depreciated resulting in dwindling foreign exchange reserves and a burgeoning current account deficit. Due to these factors, the Kwacha has experienced significant downward pressure since 2015.

Kodongo (2011) found that exchange rates are vital during election periods because foreign investor decisions in African markets are based on fluctuations in real exchange rates. In the case of Zambia, the 2016 elections are a classic example of how fluctuations in real exchange rates inform the investment decisions of foreign investors. The Kwacha depreciated by 1.52 percent when the opposition United Party for National Development (UPND) filed a post-election petition in the Constitutional Court on the grounds that the electoral process had been

marred by violence and fraud to the benefit of the ruling Patriotic Front (PF), who were declared the winners by the Electoral Commission of Zambia (ECZ). During this period, the country also experienced a shortage of US Dollars because investors were holding on to their money in a bid to observe and wait for the outcome of the presidential election petition ruling. A strong relationship therefore exists between the exchange rate and elections in Zambia and the world over. There is a clear indication that elections affect investors' choice of whether to invest in an economy.

3 CHAPTER THREE:

LITERATURE REVIEW

3.1 Introduction

This chapter reviews empirical literature relating to political events and how they impact on the currency stability of a national economy. The chapter shall delve into short term factors which affect change or fluctuations in currency stability. In doing so, the study shall review theoretical and related models as well as previous studies in relation to objectives of the study. An analysis of the relationship between political events and exchange rate stability shall also be covered under this chapter.

3.2 Exchange Rate Stability and Political Events

According to Schnabl (2007), a stable exchange rate is important for stimulating economic growth and maintaining price stability. This implies that any unpredictable fluctuations in exchange rates could affect growth, price stability and eventually lead to unsustainable sovereign debt levels and increased volatility in the capital and foreign exchange markets. Angelovska (2011) found that capital markets are reflective of how stable the political situation in a country is. Political events do not only affect a country's stock market but also the currency position of any nation.

Although political events do not necessarily have a direct relationship with exchange rates, events such as elections are very important to foreign investors because before choosing their investment option in a country's capital market, they conduct a study of how stable that country is and how the results of the elections would affect their investments (Angelovska, 2011). Therefore, the relationship between elections and exchange rate movements could have important policy implications. Central banks in particular can use a variety of monetary policy tools to address currency devaluations with the aim to improve transparency, liquidity and currency stability.

Political events such as elections have a significant impact on investor sentiment, and the behaviour of the foreign exchange markets in emerging market economies. Volatility in any foreign exchange market can be easily increased by unexpected statements and ad hoc changes in policy by politicians. It is therefore important that before, during and after elections, a conducive and transparent environment is created for all stakeholders so that any adverse reactions in the capital and foreign exchange markets are limited.

3.3 Theoretical Framework

The study at hand however, is related to a strand of literature that relates the exchange rate market to political economy variables. Scholars such as Bernhard and Leblang, (1998: 68) argued that "political uncertainty will make the forward exchange rate a less accurate predictor of future exchange rate movements. According to rational expectations arguments, economic agents incorporate all available information both economic and political when making economic decisions". However, political processes, elections, cabinet formations, cabinet dissolutions and monetary policy adjustments may generate uncertainty about the future composition of the government and, as a consequence, the government's commitment to the exchange rate level. Therefore, economic agents will be less able to predict future exchange rate movements during these periods of political uncertainty.

The occurrences of major political events are a sign of a potential shift in government policy or may well be a signal of potential uncertainty in society. This can in turn cause market-wide valuation influence (Bernhard and Leblang, 1998). Economists and researchers world over have attempted to find the root causes and solutions to this phenomenon, however, most of the existing studies focus on effects of economic events on stock prices and there has been far less empirical work that examines the impact of political events on the exchange rates, in particular, those in emerging markets. Our study will take a different direction by using an event study approach to analyse how elections as political events have impacted the local currency in Zambia.

In order for the topic to be exhaustive, it is imperative to look at theories that explain the possible determinants of exchange rates and currencies at large. The Zambian kwacha (ZMW)

is an important tool which investors use as an economic indicator. Chipili (2010) found that the Kwacha had fluctuated considerably against major currencies since the early 1990s. According to him, existing empirical evidence revealed that fluctuations in exchange rates can potentially generate distortions in the economy. It is therefore important to note that value against other currencies influences foreign investors in their investment decision making.

3.3.1 Overreaction Hypothesis

One of the most important theories available and related to the study at hand is the Overreaction Hypothesis. The theory forms an integral part in understanding exchange rates in view of anticipated events and information. The theory has been mostly tested on stock markets, but the underlying principle behind it is that investors react to news in different ways. For instance, De Bondt and Thaler (1987) found that when it came to probability adjustment glitches, people have inclination to overact to both "good" and "bad" news. More recent scholars such as Fabozzi and Focardi (2004: 573) described the overreaction hypothesis as investors' reaction to unanticipated news. Goyal (2007) observed that investor's removal from emerging markets during the periods of crises were always large, which made the markets extremely volatile. It therefore goes without saying that investors' reaction can indeed affect the strength of a currency. The theory can also be related to how investors react during election times by withholding funding and thereby creating a demand for foreign exchange which eventually leads to the depreciation of the local currency.

3.3.2 Purchasing Power Parity

Purchasing Power Parity (PPP) theory is one of the most endowing theories in economics. The theory creates a long-run connection between prices and the nominal exchange rate. Purchasing Power Parity can be traced back to sixteen-century Spain and early seventeen century England, but Swedish economist Cassel (1918) was the first to name the theory PPP. Cassel once argued that without it, there would be no meaningful way to discuss over-or-under valuation of a currency.

Mansoor and Smotra (2008: 7) used this theory to discover the presence or absence of PPP before and after the introduction of the euro currency. They started by performing a stationarity test of the real exchange rate before and after the establishment of the euro zone and if the real

exchange rate was not stationary then they would check for the equilibrium relationship between variables and see if there were signs for the presence of PPP in the long run. They found that there is a strong relationship in the long run among the exchange rates and price indices. This is clear demonstration that markets react to news and therefore the theory of PPP can strongly relate to how exchange rates could possible react to the news of political events such as elections.

3.3.3 Covered Interest Rate Parity

According to Feenstra and Taylor, (2008), interest rate parity takes on two distinctive forms: uncovered interest rate parity and covered interest rate parity. Uncovered interest rate parity refers to the parity condition in which exposure to foreign exchange risk (unanticipated changes in exchange rates) is uninhibited, whereas covered interest rate parity refers to the condition in which a forward contract has been used to eliminate exposure to exchange rate risk. Each form of the parity condition demonstrates a unique relationship with implications for the forecasting of future exchange rates: the forward exchange rate and the future spot exchange rate. Economists have found empirical evidence that covered interest rate parity generally holds, though not with precision due to the effects of various risks, costs, taxation, and ultimate differences in liquidity.

When both covered and uncovered interest rate parity hold, they expose a relationship suggesting that the forward rate is an unbiased predictor of the future spot rate. This relationship can be employed to test whether uncovered interest rate parity holds, for which, economists have found mixed results. When uncovered interest rate parity and purchasing power parity hold together, they exhibit a relationship named real interest rate parity, which suggests that expected real interest rates represent expected adjustments in the real exchange rate. This relationship generally holds strongly over longer terms and among emerging markets.

Following the explanation on the interest rate parity above, covered interest rate parity not only helps to explain how exchange rates are determined but also comes into play when there is no arbitrage condition that is satisfied by using the forward exchange contract as a hedge, hence it is deduced that the position is covered. What this theory entails for investors is that, they would remain indifferent given a choice between two countries in the sense that a return on one

currency (the Kwacha for instance) would equal the return on a foreign currency, thereby eliminating the potential for covered interest arbitrage profits and subsequently sustaining equilibrium.

3.3.4 Political budget cycle approach

This concept is well renowned for focusing on exchange rates and elections. The concept models how incumbent governments can implement economic policies in an effort to ensure they are elected or re-elected. Given that politicians naturally have a strong desire to use various tactics during elections in order to ensure a successful campaign, they are known to implement various changes. For instance, an incumbent president may campaign by avoiding inflation in the months preceding an election, which can lead to further devaluations being delayed until after elections.

Ames (1987) carried out a study on 17 Latin American countries in which he showed that between 1947 and 1982, government expenditure increased by 6.3 percent in the pre-election year and decreased by 7.6 percent in the post-election year. Schuknecht (1996) also did a similar study but his was on developing countries where he tested 35 of them over the period 1970 to 1972. His findings entailed that developing countries had room for manipulation as checks and balances are weaker in these countries. He therefore concluded that the incumbent will have more power over monetary and fiscal policy thereby showing that there is significant evidence of elections having an effect over fiscal balance.

Stein and Streb (2004) tested for the political budget cycle in nominal exchange rates for a sample of 26 Latin American and Caribbean countries from 1960 to 1994. They found no evidence of pre-electoral appreciation, but did however show that the average rate of nominal depreciation is two percentage points greater in the months following elections.

3.3.5 Foreign Direct Investment

According to the risk aversion theory, Foreign Direct Investment (FDI) decreases as exchange rate volatility increases. This is because higher volatility in the exchange rate lowers the certainty equivalent expected exchange rate. Certainty equivalent levels are used in the

anticipated profit roles of organisations that make investment decisions today in order to realize profits in future periods (Goldberg and Kolstad, 1995: 870).

Campa (1993: 615) extends this claim to include risk-neutral organisations by using the argument of future expected profits. He hypothesizes that as investors are concerned with future expected profits, firms will postpone their decision to enter as the exchange rate becomes more unstable. Risk neutral firms will thus be deterred from entering foreign markets in the presence of high levels of exchange rate uncertainty.

Having gone through the main theories that govern effects of exchange rates as well as various theories that scholars have come up with to explain exchange rates, the study will now expand on researchers, economists and scholars who researched on similar studies as the topic at hand.

3.4 Empirical Literature

In a study by Frenkel (1981) where he focused on the impact of news and unanticipated events on exchange rate movements, he found that by modelling news as unexpected change in the interest rate differential, exchange rate movements are affected. However, he used monthly data and as such; his findings may be criticised to lack very strong evidence of the role of news on the exchange rate of a nation. However, it is not always the case that monthly data may be considered as not being an accurate predictor in the sense that depending on the methodology used, accurate results may be obtained. The study at hand will however focus on an event study approach to yield the desired results accurately based on daily data. The author believes that daily data will yield more accurate results as opposed to monthly.

Bachman (1992: 210) incorporated political factors to explain the forward exchange rate bias. He went on to argue that "elections provide investors with news about the country's probability of adopting different economic policies that alter the relative value of that country's assets" Consequently, he contends that elections will change the short-term accuracy of the forward premium only if the election results are deemed to be a surprise. His findings are particularly interesting in the sense that general elections often bring with them high volatility and uncertainty. Esparza (2015) supports his ascertain when he found that in Turkey where a snap election called by an under fire government rattled local stock and currency markets. In calling

an early election, Turkey President Recep Tayyip Erdogan did the unthinkable as polls ahead of the election showed that his party was failing to reach the majority vote which had been lost for the first time in 12 years. As a result, this led to market stability in that country.

Garfinkel, Glazer and Lee (1999) did a study on how a surprise in an election can lead to exchange rate uncertainty. They discovered that in order for the domestic currency to be higher, competing candidates in an election must choose between returns on labour or owners of capital. They went on to discover that the governments usually implement policies to maintain high rates of return on capital, thereby attracting foreign funds because governments want to attempt to steer their economies. News about future economic policies can be derived from political events such as elections, the formation of new government and changes in the composition of government. Changes in the outcome of elections and therefore in the composition of the government will most likely result in policy changes. This should affect economic variables such as unemployment, economic growth, and inflation. The macro-economic results are not entirely the consequence of the economy itself but are also dependent on the long and short-term policy choices of the government. Therefore, political party differences in economic policy have the potential to move the economy along different time paths, which should manifest in different returns to stockholders (Li and Born, 2006).

According to Setzer (2006), there is present evidence to suggest that exchange rates are significantly influenced by elections. He also been discovered that if central banks are too dependent on the elected officials then the exchange rate is likely to be affected. The exchange rate may be of strategic value for the incumbent in the sense that they would need to maximize their chances of being re-elected (Cermeno and Grier 2006). Other scholars who were on this path include Adam, Kozinski and Zielinski (2013) who investigated the extent that central banks go to influence exchange rate with foreign exchange interventions when an economy has an inflation targeting system. By using daily data, they discovered that exchange rates over a 5-day event window behaved abnormally with significant abnormal returns. They concluded that central banks can in actual fact influence exchange rates even when they do not explicitly target it. The objective of this research will be to analyze and identify characteristics and patterns of real exchange rates around election periods in Zambia.

According to Ntwiga (2012) who carried out a study on election violence shocks of the 2007 general election and their effect on foreign exchange rates in Kenya. Using daily time series data from January 2007 to December 2008, pre-violence, violence and post-violence periods was analysed. The study found that the violence period had highest correlation with parameters indicating a reactive period, showing over reaction in the market. Exchange rates in emerging markets were found to correlate amongst themselves, with similar perceptions on the crisis. The violence shocks adversely affected the exchange rates by increasing asymmetrical volatility, market over reaction and negative perception of the country. Emerging and developed markets differed in perception, information flow and reactions to the violence. The study concluded that significant change in the economic and political scene is bound to shift the market equilibrium.

Other scholars that did similar studies include Mandacı (2003) who investigated the impact of general elections on market index and found that following only some elections there are abnormal returns in the market. Martinez and Santiso (2003) provide the additional evidence on the political event. This article focuses on the interactions between politics and financial markets in emerging economies. More precisely, it examines how financial markets in the United States react to major Latin American political events. The case study focuses on the 2002 Brazilian presidential elections from a historical and quantitative economic perspective, thus showed that the essential character of emerging markets lies specifically in this elaborate connection between political uncertainty and financial volatility.

Perotti (1997) found that governments are most likely to abandon an exchange rate peg right after an election. Klein and Marion (1997) tested a similar hypothesis in a sample of 17 Latin American countries from the periods 1956 to 1991. They argue that politicians weigh the economic costs of having a misaligned exchange rate with the political cost of devaluing right before an election. Similarly, Gavin and Perotti (2001) studied the pattern of real exchange rate movements in a sample of 26 Latin American and Caribbean countries from 1960 to 1994. They look at sample averages and found that the exchange rate is 3.7 times more likely to suffer a large depreciation of at least 25percent in the post-election period as compared to the pre-election period.

Mei and Guo (2002) carried out a study on political uncertainty, financial crisis and market volatility. They found that governments are highly attracted to being re-elected. As a result, speculators (both domestic and foreign speculators) may predict that the government would focus more on defending expansionary policies as opposed to taking on policies that would defend the currency. According to them, more people would be tempted to sell leading to increased pressure on defending the local currency. They summed up their finding by concluding that political elections affect investor expectations and hence, elections are key in moulding market activities.

Lastly, Liu and Pauwels (2012) study the impact of external political pressures on the Yuan. From their findings, they called for a faster Yuan appreciation on the daily returns and provisional volatility of the central parity rate of the Yuan exchange rate. They find that volatility of the Yuan is not as a result of international pressure but these pressures certainly have an adverse effect on the Yuan's volatility.

This study will be able to add more insight to the notion that political events do indeed affect exchange rates. This notion is further supported by Mpofu and Peters (2016) who used the first strand concept to analyse the impact of political risk on the foreign exchange market and found that there are abnormal returns after in daily data, which meant that, political risk does in fact cause a country's currency to vary by virtue of the mere presence of political risk. Not only did they discover that a country's currency is affected by political risks, but they also found that unfavourable events such as elections cause the foreign exchange market to react strongly as opposed to favourable events. Elections are perceived as unfavourable because they cause a disruption to services and may restrict inflow of foreign investment as investors will hold on to their funds till they ascertain that the coast is clear.

3.5 Summary of Literature Review

It is evident that there is not a lot of research done around the area of how political events such as elections affect the currencies of most emerging markets. There is need therefore to bridge this gap by having more studies on such an interesting topic. Zambia is one of the fastest growing developing countries in Africa which makes its currency a good study choice in the sense that we will be able to observe strong results from the methodology below. Although

other studies have looked at the volatility of the Kwacha, this study will focus on presidential elections and how political events affect the Kwacha. It should be noted that although the Kwacha is not a very liquid currency, the mere fact that the country is landlocked entails that it trades frequently against the dollar as a result the country depends on more goods and services which are procured from outside the country.

4 CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

This chapter describes the research approach and strategy adopted in conducting the study. Therefore it shall run with the main themes starting with research methodology; study area; data sources; sampling method and sample size; data collection procedure; data collection instruments; data analysis and finally shall look at ethical considerations followed by observations during the entire study.

4.2 Background on the Event Study Methodology

The study will use an event study to establish the impact of political events on the Zambian Kwacha. In order to appreciate the reason for choosing this method, it is equally important to define the method itself. According to Basdas (2013), "an event study refers to tests of the impact of an economic or political event on stock prices by adopting different performance measures." Dolly (1933) discovered that the first event study was on stock splits, where both the methodology and the application area of event studies have since been developed. By conducting an event study, Beaver (1968) also investigates the reaction of common stock investors to earnings announcements. Among several studies, early analyses of Ball and Brown (1968), Fama, Fisher, Jensen and Roll (FFJR, henceforth) (1969) and Brown and Warner (1980; 1985) are the major cornerstones. Indeed, the studies of Ball and Brown (1968) and FFJR (1969) introduce event studies whereas Brown and Warner (1980; 1985) describe how to conduct event studies.

Kothari & Warner (2006) carried out a survey that found that the event study approach has not changed significantly in the last 40 years and they found that the method is still based on a table method that was previously developed by Fama, Fisher, Jenson and Roll (1969) in the classical stock split event study. However, modern day research uses more of intraday data which shows that the event study method has changed by use of more frequent return periods.

4.3 Research Design

Cooper et al. (2003) define research design as the process of focusing on the researcher's perspective for the purpose of a particular study. To construct an event study, the event, event date, event window, estimation window and estimation model was determined. The events defined were the general elections of 2011, 2015 and 2016. The event window was 30 days i.e. 30 days before and 30 days after the events (election). These can be expressed as -30 to +30.

Holler (2014) found that from 400 event studies, the estimation window ranges from 30 days to 750 days. Armitage (1995) found that studies that investigate the sensitivity of results recommend that results are not sensitive to varying estimation window lengths as long as the window lengths exceed 100 days. Event windows typically range between 1 and 11 days and centre on the event day (Holler, 2014). The most common choice of event window length according to Oler, Harrison, and Allen (2007) is 5 days whereas scholars such as Chen and Wu (2001) choose 15 days as their event window However, according to the event study metrics, there is no consensus with respect to the length of the event window.[1]It has been observed that from literature available, most studies either use an estimation window of 180 or 200 trading days ending either 10 or 20 days prior to the event with a maximum event window of 41 trading days. The study however took on a similar approach as Ochieng (2013) who used 30 days as the event window considering that he focussed on impact of elections on the local currency in Kenya. The t-test was used as the test statistic due to its simplicity of use. The level of significance was set at 5% using a two tailed test at a 95% confidence level.

4.4 Data Collection, Frequency and Choice of Data

Data will be collected from the Bank of Zambia (BOZ), Central Statistics office (CSO), online financial research data-bases such as the electoral commission of Zambia website and the bank of Zambia website which offer historical online economic data. BOZ is the Central Bank of Zambia entrusted with monitoring and regulating both financial and currency markets in Zambia and hence the data is said to be reliable and complete. This is deemed as the source to have the most reliable source of data considering the variables that will be investigated. The study will also make use of secondary data sources such as review of electronic and hard copy sources. The hard copy sources include books, published and unpublished journals, articles,

[1] See http://eventstudymetrics.com/index.php/9-steps-to-follow-when-performing-a-short-time-study/).

theses, annual reports such as finance and economic reports and government documents and legislation because published books, journals, reports, mimeographs, documents and so on contain important data for research, Nghosh (1992). Electronic sources on the other hand will include the Internet, and other media such as newsprint. More importantly, the study will also make use of data from the Ministry of Finance and National planning of the government of the Republic of Zambia, civil society organizations involved in finance and economic affairs, sector reports from institution like the Bankers Association of Zambia and reports on the performance of financial institutions in Zambia.

4.5 Sampling

The Sampling period for the study at hand will cover period from January 2011 to August 2016. The data was divided into the pre and post-election periods of the 2011, 2015 and 2016 presidential elections. The currencies for the study are USD and ZMW.

Purposive sampling will be used to determine the sample. This is the technique that allows the researcher to use cases that have the required information with respect to the objectives of the study (Mugenda and Mugenda, 2003). This sampling technique is most suitable because the data of interest can be selected for the period that is being studied.

4.6 Data Analysis Methods

Data will be analysed using S.P.S.S. as well as Microsoft Excel. An Event study is a statistical method to assess the impact of an event on the value of a factor (Gilson and Black, 1995). For example, the announcement of a merger between two business entities can be analysed to see whether investors believe the merger will create or destroy value. The basic idea is to find the abnormal return attributable to the event being studied by adjusting for the return that stems from the price fluctuation of the market as a whole.

4.7 Full Structure of the Event Study

Under this section, the full structure which will also encompass all the elements of the event study will be explained.

4.7.1 Event window

The event window describes all the days surrounding the event. It is important in the event study because it enables assessment of a trend leading up to the event as well as reaction after the event. The period before and after the elections is represented by t = 0. For days before the event, (-) is prefixed whereas (+) denotes days after the event. Taking into account that the study at hand analysed exchange rates as opposed to stock prices, 30 days was chosen as the event window. This entails that exchange rates between the Kwacha and USD were examined for 30 days prior and 30 days post the event.

Previous scholars such as Chan & Jelik used 10 days for both after and before the event window. Similarly, Chen & Wu selected 15 days as their event window. However, the study used 30 days as aligned with similar scholars such as Ochieng (2013) who also used 30 days event window to analyse the effect of political risk on the exchange rates in Kenya.

4.7.2 Return Characterisation

The data was analysed using the market model which measured the estimation of abnormal returns on exchange rates. Below is the formula for the model to compute abnormal returns;

$$\mathrm{ARk}_t = \mathrm{Rk}_t - \mathrm{Erk}_t$$

Where;

ARk_t = Abnormal Return of currency prices k on day t

$\mathrm{Rk}_t - \mathrm{Erk}_t$ = Actual Return of currency prices k on day t

Erk_t = Expected Return of currency prices k on day t

However, before the abnormal return can be calculated, the actual return must first be found for the period t using the formula below.

Actual Return of currency k in period t will be computed as follows;

$$Rk_t = \frac{Pk_t - (Pk_{t-1})}{(Pk_{t-1})}$$

Where

Pk_t = Price of currency k on day t

Pk_{t-1} = Price of currency k on day prior to t

After getting the actual return, we then find the expected return. The conversional formula for expected return is given by the formula:

$$Erk_t = af + bf(Rmt)$$

Where; af = Risk free rate of return, bf – Relative riskiness of forex market prices and Rmt = rate of return of interbank rate on day t

The expected return can also be calculated in excel by averaging the actual return at event day of -1.

4.7.3 Estimation Period and Estimation Model

The period that is used to estimate the normal returns before the event window in the market model is referred to as the estimation period. For the study at hand, 264 days were used as the estimation period. Although there is no significant evidence to suggest that whether a short period is different from using a longer period. One scholar that attempted to distinguish the two is Chan & Jelik (2007) assessed the use of 160 days and found that there is no particular advantage to using a longer period. Considering that the study is looking at elections which ordinarily are known well before they occur, use of a longer period is therefore justified.

The research will use the market model approach to analyse the date collected. There are a selection of market models available but the capital asset pricing model (CAPM) and the arbitrage pricing theory (APT) are the most used. Stephen Ross developed the APT theory which looks at amalgamating more than one risk factor for normal returns of a given asset. The

CAPM was developed by Sharpe (1964) and looks at how systematic risk influences the normal or expected return.

4.7.4 Cross – Sectional Aggregation and Statistical Techniques

The abnormal returns were aggregated trading day wise and then divided by the number of currencies. Thus cross sectional and time series aggregation will be carried out. The average abnormal return (AAR) is then calculated as follows:

$$AAR_t = \frac{1}{N}\sum_{t=1}^{rn} ARK_t$$

Where, for every N currencies, we find the cross sectional average abnormal return on day t.

After this Cumulative Abnormal return (CAR) will be computed. CAR is usually used in order to assess the change in wealth of Investors. The method looks at the performance of investors by adding up abnormal performance of each day for the entire length of interest.
The formula for CARt is as follows;

$$\mathrm{CAR}_t = \sum_{t-j}^{t} \mathrm{ARi}$$

Where
j = Number of event days before day t

We then sum the average abnormal returns over the period (t) to come up with the cumulative average abnormal return (CAAR). CAAR is important because as a statistic tool, it analyses the aggregate effect of the abnormal return. The formula for CAAR is:

$$\mathrm{CAAR}_t = \sum_{t=1}^{T} AAR_t$$

Finally the T-test will then be used to determine the statistical significance of ARt. For computation of t statistics the aggregate pre-event standard deviation of abnormal returns of all the forex was computed. Individual currencies pre-event standard deviation i.e. from --30 to 30 will be computed and the aggregation done. The formula for estimation of pre-event standard deviation of daily abnormal returns is as follows;

$$\mathrm{i,pre\ s} = \sqrt{\frac{\sum(\mathrm{ARk}_t - \mathrm{AARk}_t\ \mathrm{pre})}{\mathrm{n}}}$$

Where

i, pre s = Standard deviation of abnormal returns of currency i estimated for pre-event measurement period.

n = number of days in pre-measurement period

The null hypothesis being tested was whether the mean abnormal return at time t is equal to zero. If AARt or CAARt are statistically significant, it shows that the forex prices on an average reacted to elections. This will be done by comparing the actual return over the event window to the assumed return at a 5 % significance level. The T statistic will then be further simplified in the sense that, if the result is greater than 1.671 or -1.671 then there is evidence of significant abnormal returns and in the event that it is below 1.671 it then means that there are no significant abnormal returns.

The t-statistic for the cumulative abnormal return is calculated as follows:

$$t = \frac{\mathrm{CAR}_t}{L\ 6^2(AR_t)}$$

Where, *L* relates to the length of time one wishes to assess

4.8 Reliability and Validity

Validity refers to the extent to which a measure reflects the concept it intends to measure. If the measures used actually measure what they claim to, and if there are no logical errors when

drawing conclusions from the data, the study is said to be valid. The validity of this study is embedded in the fact that the data gathered, directly address the issues raised in the research objectives.

4.9 Limitations

The event study methodology is an effective method for the study at hand. However, the method also has limitations which have been presented below.

The most important limitation is that the Zambian market is relatively small and the local currency is not very liquid. It was difficult to have access to data that streams over a long period of time as information is not readily available.

Finally, the method takes on the assumption that confounding events surrounding the event window do not exist. However, prevailing market and poor economic conditions as well as political issues will always ensure that confounding events prevail.

4.10 Conclusion

This section has delivered a detailed account of the sampling procedure and the final sample selection. Additionally, the event study methodology has been explained as well as the variables that were used for the study. Further validation was provided to ascertain why this particular method was chosen. Literature has also been given pertaining to authors that support the notion that the event study method is a reliable tool of measuring the impact of events. Finally key limitations are noted and attempts are made to evade all flaws.

The following Chapter will therefore provide an analysis of the data collected as well as interpretation of the results.

5 CHAPTER FIVE:
DATA ANALYSIS, RESULTS AND DISCUSSION

5.1 Introduction

This chapter will start by analysing the data collected followed by an empirical discussion of the results observed by the study. A detailed report and interpretation of the results will follow. The chapter shall conclude with a summary of the appropriate results and how these results relate to the most notable literature. The chapter therefore provides the basis on which to make conclusions and recommendations.

5.2 Data Presentation

This study analysed the returns of the currencies and compared the same with the market returns so as to establish the abnormality of returns following the September 2011, January 2015 and August 2016 elections. The results below are from the quoted currency between the ZMW and the reference currency USD.

5.2.1 Results for the September 2011 Elections

In order to fully exhaust the findings, the AR, CAR, AAR, CAAR results are displayed in the table below. A t-test was then carried out on the abnormal returns with the test reflected as being either positive to presence of significance abnormal returns or negative to this effective. The statistics presented in the table below reflects that the abnormal returns are significant post the political event. It should be noted that the table shows the days only when the returns exhibited significant abnormal returns. The full results for the 2011 presidential elections are attached in the appendix section of this study.

Table 4.1: Results showing significant abnormal returns for the 2011 Elections.

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
3	3.40%	3.33%	0.14%	0.39%	2.481	**yes**

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
5	3.93%	3.86%	0.05%	0.46%	2.863	**yes**
7	2.58%	2.50%	-0.03%	0.33%	1.878	**yes**
8	-6.01%	-6.08%	-0.14%	0.19%	-4.381	**yes**
12	3.99%	3.92%	0.16%	0.81%	2.907	**yes**

Source: Research findings (*refer to table 7.5 in appendix for full results)

From available data, a 30-day analysis (both before and after elections) was carried out for the September 2011 elections in Zambia. The results indicate that the exchange rate had statistically significant abnormal returns over the period after elections as opposed to before elections.

Day, 3,5,7,8 and 12 all had significant abnormal returns as displayed in the table above. Dwelling deeper into the findings, it was observed that within 2 weeks after the election date, abnormal returns were prevalent as compared to none before the elections.

The graph below further examines this finding by using the CAAR for both periods. The graph will show the trend of returns between the two currencies with indications of a pattern of significant movement after the elections. The graph will give a much clearer visual picture of the findings for the September 2011 elections in the sense that investors appear to react post the election as opposed to before. This could be attributed to the mere reason that result for elections are not announced immediately after the election date but many days after the event. In Zambia, final results for presidential elections are usually announced within a two week period.

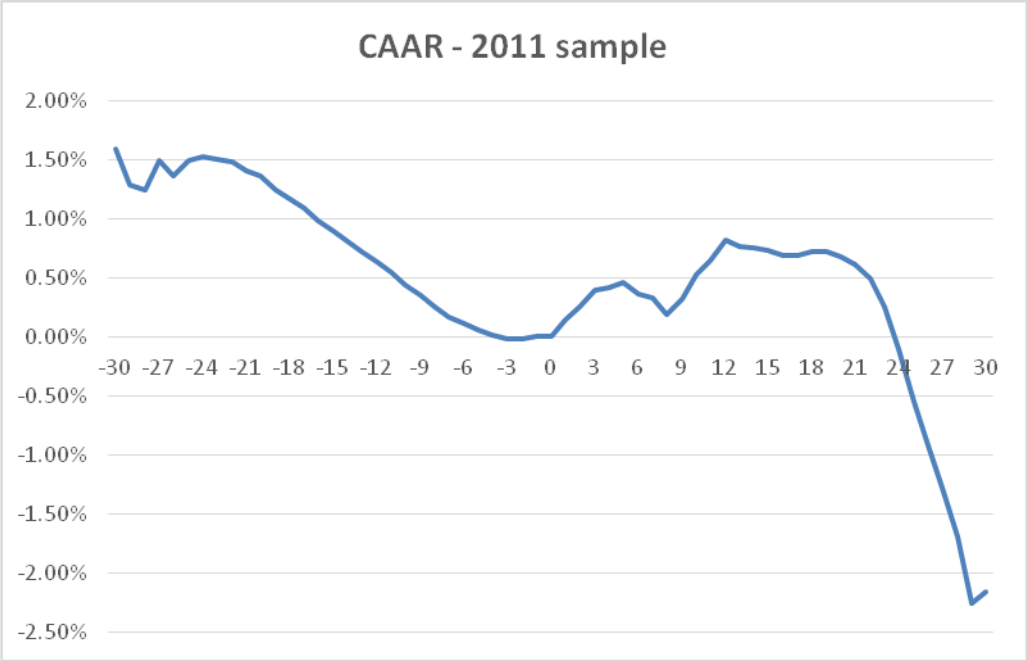

Figure 1: Line Graph Showing pattern of movement of CAR for the exchange rates around the September 2011 election in Zambia.

As can be observed in the graph above, as the event date drew closer, the exchange rates hovered closer to zero meaning that there is no significant effect of political events on the Kwacha. However, there is a significant dip after the elections which entails that investors reacted while awaiting results of the 2011 general elections. The results resonates with the change of government that took place in 2011 when a new political party; the Patriotic Front (PF) came into power replacing the ruling party; the Movement for Multi-Party Democracy (MMD) that had been at the helm since 1991.

The results from the September 2011 general elections tend to agree with Fabozzi and Focardi (2004) that investors react to unanticipated news. When the PF government won the elections, very few anticipated this and it caused anxiety as the business community did not know the full implications of the change of government. This can therefore be attributed to the signs of the significant abnormal returns between the USD and ZMW post the elections date.

5.2.2 Results for the January 2015 Elections

In order for the research to be fully exhaustive and appreciated, performance trend between the ZMW and USD around the January 2015 general elections were also examined and analysed using the tools discussed in the study. However, before the results can be detailed, it is worth noting that the announcement for the 2015 elections came as a result of the passing away of the then President, His excellence Micheal Chilufya Sata. It is therefore imperative to deduce that these elections came as a surprise. Factoring the exchange rate dynamics, the results will therefore address the findings of Garfinkel, Glazer and Lee (1999) who discovered that surprises surrounding elections can lead to exchange rate uncertainty.

Table 4.2: Results showing significant abnormal returns for the 2015 Elections.

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-1	1.67%	1.26%	0.11%	0.20%	1.763	yes
2	-2.03%	-2.44%	0.14%	0.33%	-2.147	yes
4	-1.92%	-2.33%	0.18%	0.72%	-2.03	yes
5	2.92%	2.51%	0.26%	0.98%	3.09	yes
20	3.69%	3.28%	0.22%	3.96%	3.896	yes

Source: Research findings (*refer to table 7.6 in appendix for full results)

Results of the exchange rate between the USD and ZMW showed that there were no significant abnormal returns before the event except on day -1. Similar to the 2011 results, significant abnormal returns were also observed after the elections with the last observation being on day 20. These results are indicative that the political events did affect the Kwacha during the 30 day period after elections.

As these findings agree with available literature from scholars such as setzer (2006) and Mandaci (2003), the graph below will give a visual presentation of how the Kwacha actually performed during the event period. The abnormal returns are used in the line graph in order to give a summary of how the actual returns actually differed from the predicted returns.

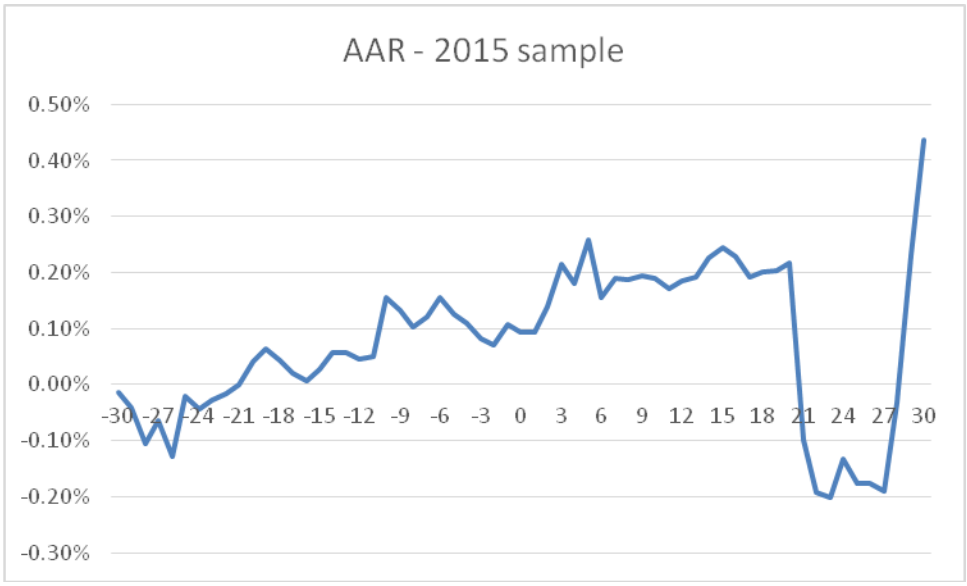

Figure 2: Line Graph Showing pattern of movement of AAR for the exchange rates around the January 2015 elections in Zambia.

The graph shows erratic movement of AAR with major movements after the elections. One possible explanation is that the general consensus during the time was that the PF had not served a full term in power and indications were that the market was anxious to see if the ruling party would continue in power following the sudden passing away of the president. It can therefore be concluded that the movements are reflective of significant findings of the effects of political announcements on the Kwacha.

Having looked at two general elections of 2011 and 2015, results in both suggest no significant effect of political announcements on the Kwacha 30 days before the event date whereas there was significant abnormal returns after the event. The study will now go further to analyse another election period of the August 2016 elections in order to draw a firm conclusion on the topic at hand.

5.2.3 Results for the August 2016 Elections

As alluded to in the previous section, the study will now display finding of the 2016 general elections and how the kwacha rallied against the USD. These results posed a different trajectory

from the two previous analysis done in the sense that they displayed significant abnormal returns both before the event date and after.

Results are given below as follows:

Table 4.3: Results showing significant abnormal returns for the 2016 Elections.

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-27	-3.85%	-2.93%	-1.28%	-14.87%	-2.15	**yes**
-26	-4.60%	-3.68%	-1.95%	-13.58%	-2.57	**yes**
-25	-3.31%	-2.38%	-2.17%	-11.64%	-1.85	**yes**
-23	3.69%	4.62%	-0.97%	-7.83%	2.06	**yes**
-21	3.14%	4.07%	-0.34%	-6.14%	1.75	**yes**
-10	3.32%	4.25%	-0.27%	-1.10%	1.85	**yes**
-9	3.13%	4.05%	-0.11%	-0.83%	1.74	**yes**
13	-3.94%	-3.01%	-0.003%	1.78%	-2.2	**yes**

Source: Research findings (*refer to table 7.7 in appendix table 7.7for full results)

Unlike the other two elections of 2011 and 2015, the 2016 results showed significant results before the elections. This is particularly intriguing in that the 2016 elections were marred by violence and disputes as earlier alluded to in the study. This brings up an interesting assertion for future researchers to examine whether violence also plays a role in forex volatility after a political event. The convincing aspect of the study is that post the event, results also exhibited findings of abnormal returns which makes all three events have a common ground to draw conclusions from. These results therefore confirm that political risk does in fact affect exchange rates mostly after the event window or better known as the transition period. In this case, elections in Zambia, in particular days after an election are a very critical period.

Following the voting process, results showed that the exchange rate continued to exhibit significant abnormal returns up until day 13. Similar to the previous findings, abnormal returns are found roughly two weeks after the elections. This coincides with the time when actual

results were announced. Subsequently, there was overall instability in the exchange rate thereby leading to the conclusion that political events did affect the Kwacha.

The graph below shows the pattern of AAR over the 2016 elections.

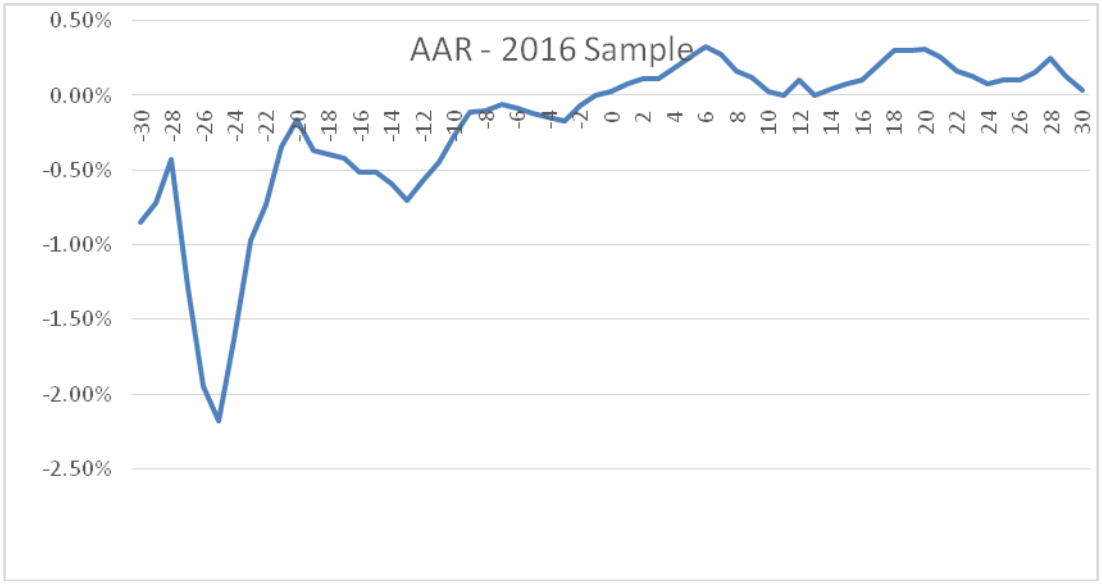

Figure 3: Line Graph Showing pattern of movement of AAR for the exchange rates around the August 2016 elections in Zambia.

The Line graph shows that days prior to elections, the exchange rate between the Kwacha and the United States dollar increased exhibiting significant abnormal returns before the event date. The exchange rate showed sharp increases and decreases between the entire periods.

The study was aimed at establishing the variability of the forex yield resulting from political events as well as to determine the forex market reaction to the event. The information presented in the graph above shows that the variability in exchange rates is erratic before a political event such as an election. However, the results tend to show that, markets react positively after the events especially after results are announced especially if they appear to be favourable.

5.3 Relating Findings to the Theory

The study at hand took on an event study approach to track abnormal returns over a period for a specified event. AAR was computed throughout the event periods as displayed in the tables above and it was observed that the two currencies performed consistently at all three stages. Overall, it can be deduced from the AAR over the entire three election periods that the exchange rate normally moves closer to zero closer to the event date. This entails that investors play the "wait and see" game. However, the study observed that the Kwacha appeared to stabilize after day 20 over the entire three election periods. This indicates that after the election process is concluded, the currency performs at its expected level.

AAR is calculated during the three events and presented in the tables above. From the findings, it can be distinguished that AAR for the Kwacha against the United States Dollar was erratic during the entire event window. Considering that AAR was found to be positive and negative in the period after the election meant that the Kwacha reacted both ways towards the events. In the pre-event period the AAR for the Kwacha was found to have both negative value and indication the market was not sensitive to political events, whereas the study found that periods surrounding the event after the elections exhibited significant abnormal returns indicating that the Kwacha was sensitive to the event. The mere presence of significant abnormal returns entails that there was evidence of the Kwacha being affected by the announcement of elections. In other words, because of elections, the Kwacha did not perform as it would have been expected to had the elections not been there.

The finding are therefore in line with other scholars who were on the same path and similar topics. Bailey and Chung (1995) are such researchers who examined the impact of political uncertainty on financial crises using a panel of twenty-two emerging markets. They concluded that there is a major relationship between elections and the financial crisis. They went on to control for different economic and financial conditions and discovered that political uncertainty was a major contributing factor to most of the financial crisis in emerging markets. They further described how institutional investors take into consideration elections when they made investment decisions during these periods. Stein and Streb (2004) from their study of nominal exchange rates in 26 Latin American and Caribbean countries found no evidence of pre-

electoral appreciation, but did however show that the average rate of nominal depreciation is two percentage points greater in the periods following elections.

From this study, it was observed that there is increased volatility during the election period. The results therefore suggest that political uncertainty is a contributing factor to the Kwacha performing poorly against the USD during these periods. From the Zambian perspective, elections should therefore be given the much deserved attention as they play an important part in overall economic health of the country. As far as investors are concerned, they should consider their decisions as elections play a pivotal role in re-distribution of political supremacy. The bottom line for these investors is that elections portray uncertainty and there are implications for the outlook of a country such as Zambia. Political events do not only affect currency value and performance but also has many more other effects such as economic outlook, country perception and war (in rare extreme circumstances). The author therefore recommends that future researchers look into other economic models that may give more insights on this debate.

As out rightly highlighted in the study, most research has mostly focused on the impact of stock prices. Given that there has been little empirical literature on emerging market let alone Zambia, the study provided a good insight into how local currency can be affected by political announcements. New efforts by Bittlinger (1998) drew conclusions about how there were close relationships between political risk and market volatility during the transition from imperial to Weimar Germany. He focused on exogenous political shocks in Germany during the pre–war period and discovered that there is a link between market volatility, political uncertainty and economic recession

Relating others scholar that looked at volatility of the market as a result of political risk are Kim and Mei (2001) who found a close correlation between political risk and the financial markets in Hong Kong. This study provides an interesting ordeal from a Zambian financial market perspective and contributes to this school of thought of political risk. However, the study took on a new source of political risk that is associated with presidential elections and how they affect a local currency such as the Zambian kwacha. Not only was a time frame attached, but also use of the event study methodology to analyze the data and draw conclusions. In so doing,

this study provides additional information as to how political events can cause shifts in local currencies.

After extensive analysis and interpretation, it can be deduced that there was sufficient evidence present to conclude that political events can cause the return on exchange rates to be significantly different from what they would have been in what can be perceived as a normal environment.

Having looked at sensitivity of the exchange rates in relation to the event (elections), the findings support the study by Setzer (2006) that there is evidence to suggest that exchange rates are significantly influenced by elections. The study at hand found that the null hypothesis was that there were no abnormal returns between the kwacha and USD, hence this was rejected in favour of the alternative considering that the Zambian kwacha exhibited signs of significant abnormal returns. This is therefore clear indication that the exchange rate is sensitive to political risk. This trend can also be attributed to speculation by the foreign investors in the sense that they hold on to forex pending election results.

From the findings on abnormal returns for events after elections, the study found that there are abnormal returns which coincides with the study by Mandacı (2003) who investigated the impact of general elections on market index and found that following only some elections there are abnormal returns in the market. It is also worth noting that our study however concluded that towards the end of the event period, the exchange rate stabilizes implying that favourable results have a positive effect on the exchange rate between currencies.

The findings in the study have the following practical implications for key stakeholders: First, looking at how the Kwacha performed against the dollar, it is cardinal for the local authorities to increase vigilance during presidential elections. Wings such as the Central Bank should be prepared to experience volatility and therefore must ensure that the Nostro accounts are adequately funded. Second, investors should ensure to hedge and protect their investments during this period as their returns are likely to be affected during this time. Lastly, financial players should ensure to avoid assumptions of a constant price when placing derivatives during this period as market volatility can increase or decrease during this period. It must be

categorically noted however, that elections do not mean that there will be a collapse of the financial market but that there will be a period which will see the local currency battle against the dollar. This period is therefore crucial for planning purposes and for a sustained economic and financial environment.

5.4 Conclusion

It has been argued that political risk is a vital tool for predicting exchange rate risk. This study has contributed to this notion through its findings that elections have an impact on the exchange rate between two currencies. A summary of the empirical results is given below to illustrate this assertion as well as to give an overview of the research findings.

It is worth noting that our study can be considered limited in that it has only compared one currency to the Kwacha and the study only focused on one type of political event and that is presidential elections. A more detailed study on political announcements (such as monetary policy changes) could give a wider picture of the full effects of political announcements on a local currency such as the Kwacha. Further research on other factors that could affect a local currency during an election period would also give more insight into how other economic variables (such as inflation and interest rates) fit into the bigger picture. Such comprehensive studies would allow for better estimates of market reactions to political announcements.

6 CHAPTER SIX: SUMMARY, CONCLUSION and RECOMMENDATION

6.1 Introduction

In this chapter, conclusions are drawn from the analytical findings of the previous chapter and recommendations have been made to inform any future policy aimed at predicting exchange rates in Zambia. The limitations to this study have been highlighted coupled with recommendation on areas for further study. In an attempt to contribute to the knowledge on exchange rate determinants in Zambia as well as to better understand the relationship between exchange rates and political risk, the study will give insights from the writers' perspective on the topic at hand.

6.2 Summary

The key objective of the study was to focus on elections in Zambia and investigate the impact of such a political event of the local currency (Zambian Kwacha). Data was analysed using the event study methodology. The population of data used in this study span daily observations from August 2011 to December 2016. The period under study were the general elections of 20th September 2011, 20th January 2015 and 11th August 2016. In the analysis of data, Er, AR and CAR were calculated. From the appendix and time series data in relation to the testable hypothesis presented, the study revealed that there is a significant relationship between the two currencies in Zambia. This entails that significant political events have an impact on depreciation or appreciation of the USD in Zambia. The study has therefore demonstrated that firms and investors should concentrate on the political factors whenever they intend to make an investment decision.

6.3 Conclusion

The research has provided a logical approach to the assessing the impact of political events on the Kwacha with key focus on presidential elections. Findings indicate that there is a significant impact of elections on the kwacha. It was also discovered that the kwacha appeared to be affected more after the elections with a 30 day window. The study therefore concurred with findings of Bailey and Chung (1995) that political elections was a major contributing factor to most of the financial crisis in emerging markets.

It can be concluded from the research that the impact of political events such as elections on the exchange rate variations is significant in Zambia. It was also noted that the relationship between the USD and ZMW can both be positive and negative depending on the period involving the event date. Generally, the study found that the exchange rate is impacted the most days prior to the event (election date).

This study has therefore contributed to the knowledge of the study of political events such as elections on the Zambian Kwacha. It is worth noting that the study is the first of its kind in Zambia that has used an event study approach to ascertain the levels of volatility days before and after an election.

6.4 Recommendation

It has been established from the study that political events such as elections have an impact on the local currency in Zambia. It would therefore be cardinal for key policy makers and stakeholders to place more emphasis in ensuring a healthy and safe political environment in the country. Investors, Policy makers and regulators should also ensure to develop future models that can attempt to predict exchange rate movements in emerging markets. These models should also come with mitigating aspects to these risks.

It is also cardinal for emerging markets to ensure that they maintain strong institutions such as a very strong judicial system and independent central bank. For instance, if the central bank is independent, they can help to manage exchange rate volatility before elections. Key policy makers should therefore ensure that they come up with continuity policies after elections as this will be instrumental in easing investor confidence and subsequent market reaction to political events.

6.5 Limitations of the Study

Firstly, the time period was relatively small in the sense that the research only covered a period from 2011 to 2016. It would have been interesting to observe the study over a larger period,

however access to data being the other limitation affected the attempt to study the topic over a longer period.

Secondly, the study had a limited number of currencies with only the local currency ZMW compared to the USD. It would therefore be prudent for scholars and researchers to extend the sample to a larger set of currencies in order to verify the findings of this study.

Thirdly, the Forex market in Zambia is highly illiquid in the sense that there are no market makers available. The bid and offer spreads in banks are usually wide and there are situations where there are no off takers on the other side to buy forex. This thus leads to quick appreciations and depreciations of the exchange rate within short periods of time. Hence, the exchange rate volatility can be affected by other factors and not limited to political events such as elections.

6.6 Areas for Further Research

One interesting future research aspect would be to involve tax regimes and how they impact on investor confidence. Various emerging markets employ different tax policies depending on their fiscal policies in their budgets. There is very few or no literature at all in Zambia that has researched on this topic. It would therefore be interesting to see what findings can eminent from such a study considering that investors are well renowned for investing in countries with a suitable tax policy.

Another potential future research area may include the aspect of sovereign ratings and how they impact on the exchange rate. In Zambia for instance, the country recently issued large amounts of euro bonds and the effects of these borrowings have impacted on the local economy negatively. Had there been extensive literature available, there would have been no excuse for the country to embark on such levels of debt. This also goes for other countries in Sub Saharan Africa such as South Africa that have battled with rating agency and a weakened local currency. A study in this line would be a vital tool for a lot of emerging nations at large.

7 References

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8 APPENDICES

Table 7.1: Summary of the Empirical Results	
Sample	**Exchange rate effect**
30 days before 2011 elections	Negative effect
30 days after 2011 elections	Positive effect
30 days before 2015 election	Negative effect
30 days after 2015 election	Negative effect
30 days before 2016 election	Positive effect
30 days before 2016 election	Positive effect

Table 7.2 Summary of 2011 Presidential Election Results			
Candidate	**Party**	**Votes**	**%**
Micheal Sata	Patriotic Front	1,170,966.00	41.98
Rupiah Banda	Movement for multi-Party Democracy	987,866.00	35.42
Hakainde Hichilema	United Party for National Development	506,763.00	18.17
Charles Milupi	Alliance for Democracy and Development	26,270.00	0.94
Elias Chipimo Jnr	National Restoration Party	10,672.00	0.38
Tilyenji Kaunda	United National Independence Party	9,950.00	0.36
Edith Nawakwi	Forum for Democracy and Development	6,833.00	0.24
N'gandu Peter Magande	National Movement for Progress	6,344.00	0.23
Godfrey Miyanda	Heritage Party	4,730.00	0.17
Fredrick Mutesa	Zambians for Empowerment and Development	2,268.00	0.08
Invalid/Blank votes		39,602.00	

Source: Electoral commission of Zambia

* Voter Turnout was 53% against a total number of 5,167,154 registered voters.

Table 7.3: Summary of 2015 Presidential Election Results			
Candidate	**Party**	**Votes**	**%**
Edgar Lungu	Patriotic Front	807,925.00	48.33
Hakainde Hichilema	United Party for National Development	780,168.00	46.67
Edith Nawakwi	Forum for Democracy and Development	15,321.00	0.92
Nevers Mumba	Movement for multi-Party Democracy	14,609.00	0.87
Tilyenji Kaunda	United National Independence Party	9,737.00	0.58
Eric Chanda	Fourth Revolution Party	8,054.00	0.48
Elias Chipimo Jr	National Restoration Party	6,002.00	0.36
Godfrey Miyanda	Heritage Party	5,757.00	0.34
Daniel Pule	Christian Democracy Party	3,293.00	0.2
Ludwig Sondashi	Forum for Democracy and Development	2,073.00	0.12
Peter Sinkamba	Green Party of Zambia	1,410.00	0.08
Invalid/Blank votes		17,313.00	

Source: Electoral commission of Zambia

* Voter Turnout was 32% against a total number of 5,166,084 registered voters.

Table 7.4: Summary of 2016 Presidential Election Results			
Candidate	**Party**	**Votes**	**%**
Edgar Lungu	Patriotic Front	1,860,877.00	50.35
Hakainde Hichilema	United Party for National Development	1,760,347.00	47.63
Edith Nawakwi	Forum for Democracy and Development	24,149.00	0.65
Andyford Banda	People's Alliance for Change	15,791.00	0.43
Wynter Kabimba	Rainbow Party	9,504.00	0.26
Saviour Chishimba	United Progressive People	9,221.00	0.25
Tilyenji Kaunda	United National Independence Party	8,928.00	0.24

Table 7.4: Summary of 2016 Presidential Election Results			
Candidate	**Party**	**Votes**	**%**
Peter Sinkamba	Green Party of Zambia	4,515.00	0.12
Maxwell Mwamba	Democratic Assembly	2,378.00	0.06
Invalid/Blank votes		85,795.00	

Source: Electoral commission of Zambia
* Voter Turnout was 56% against a total number of 6,698,372 registered voters.

Table 7.5: Complete Research finding for the September 2011 Elections.

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-30	0.30%	0.22%	0.30%	1.58%	0.215	no
-29	-0.21%	-0.28%	0.04%	1.29%	-0.151	no
-28	-0.81%	-0.88%	-0.24%	1.25%	-0.592	no
-27	1.21%	1.14%	0.12%	1.49%	0.883	no
-26	-1.11%	-1.18%	-0.13%	1.37%	-0.811	no
-25	0.40%	0.33%	-0.04%	1.49%	0.291	no
-24	0.40%	0.33%	0.02%	1.53%	0.290	no
-23	-0.01%	-0.08%	0.02%	1.50%	-0.005	no
-22	0.50%	0.43%	0.07%	1.48%	0.364	no
-21	-0.21%	-0.28%	0.05%	1.41%	-0.152	no
-20	0.90%	0.83%	0.12%	1.36%	0.658	no
-19	-0.51%	-0.58%	0.07%	1.24%	-0.370	no
-18	0.21%	0.14%	0.08%	1.17%	0.157	no
-17	0.48%	0.41%	0.11%	1.09%	0.348	no
-16	-0.21%	-0.28%	0.09%	0.98%	-0.151	no
-15	-0.01%	-0.08%	0.08%	0.89%	-0.005	no
-14	0.09%	0.02%	0.08%	0.81%	0.068	no
-13	0.09%	0.02%	0.08%	0.72%	0.068	no
-12	0.19%	0.12%	0.09%	0.64%	0.142	no
-11	0.40%	0.32%	0.11%	0.55%	0.289	no
-10	-0.07%	-0.14%	0.10%	0.44%	-0.049	no
-9	-0.05%	-0.12%	0.09%	0.35%	-0.034	no
-8	-0.01%	-0.08%	0.09%	0.25%	-0.005	no
-7	-0.71%	-0.78%	0.05%	0.17%	-0.519	no

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-6	0.30%	0.23%	0.06%	0.12%	0.217	no
-5	-0.51%	-0.59%	0.04%	0.05%	-0.375	no
-4	-0.21%	-0.28%	0.03%	0.01%	-0.155	no
-3	-0.83%	-0.90%	0.00%	-0.02%	-0.603	no
-2	-0.53%	-0.60%	-0.02%	-0.02%	-0.383	no
-1	0.51%	0.44%	0.00%	0.00%	0.372	no
0	-0.07%	-0.14%	0.00%	0.00%	-0.052	no
1	1.30%	1.22%	0.15%	0.15%	0.945	no
2	-0.83%	-0.90%	0.11%	0.25%	-0.604	no
3	3.40%	3.33%	0.14%	0.39%	2.481	**yes**
4	-0.71%	-0.78%	0.02%	0.42%	-0.515	no
5	3.93%	3.86%	0.05%	0.46%	2.863	**yes**
6	-2.04%	-2.12%	-0.11%	0.36%	-1.490	no
7	2.58%	2.50%	-0.03%	0.33%	1.878	**yes**
8	-6.01%	-6.08%	-0.14%	0.19%	-4.381	**yes**
9	-1.45%	-1.53%	0.13%	0.32%	-1.060	no
10	1.77%	1.70%	0.20%	0.52%	1.291	no
11	-0.63%	-0.70%	0.12%	0.65%	-0.458	no
12	3.99%	3.92%	0.16%	0.81%	2.907	**yes**
13	-0.66%	-0.73%	-0.05%	0.76%	-0.478	no
14	0.19%	0.12%	-0.01%	0.75%	0.142	no
15	0.19%	0.12%	-0.03%	0.73%	0.142	no
16	-0.61%	-0.68%	-0.04%	0.69%	-0.444	no
17	-0.41%	-0.48%	0.00%	0.69%	-0.300	no
18	0.45%	0.38%	0.03%	0.72%	0.328	no
19	0.45%	0.38%	0.00%	0.72%	0.327	no
20	0.19%	0.12%	-0.04%	0.68%	0.142	no
21	0.40%	0.32%	-0.07%	0.61%	0.289	no
22	0.80%	0.73%	-0.12%	0.49%	0.582	no
23	0.69%	0.62%	-0.23%	0.26%	0.505	no
24	0.09%	0.02%	-0.37%	-0.11%	0.068	no
25	-0.80%	-0.87%	-0.44%	-0.55%	-0.583	no
26	-0.41%	-0.48%	-0.37%	-0.92%	-0.297	no
27	-0.21%	-0.28%	-0.36%	-1.28%	-0.152	no
28	-0.11%	-0.18%	-0.41%	-1.69%	-0.079	no
29	-1.22%	-1.29%	-0.56%	-2.26%	-0.891	no
30	0.09%	0.02%	0.09%	-2.16%	0.068	no

Table 7.5: Complete Research finding for the January 2015 Elections.

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-30	-0.34%	-0.75%	-0.01%	1.20%	-0.362	no
-29	-0.11%	-0.52%	-0.04%	1.22%	-0.114	no
-28	-0.11%	-0.52%	-0.10%	1.26%	-0.114	no
-27	0.05%	-0.36%	-0.06%	1.36%	0.052	no
-26	-0.42%	-0.83%	-0.13%	1.43%	-0.445	no
-25	0.05%	-0.36%	-0.02%	1.56%	0.052	no
-24	-0.26%	-0.68%	-0.04%	1.58%	-0.280	no
-23	-0.26%	-0.68%	-0.03%	1.62%	-0.280	no
-22	-0.27%	-0.68%	-0.02%	1.65%	-0.280	no
-21	-0.66%	-1.07%	0.00%	1.66%	-0.697	no
-20	-0.82%	-1.23%	0.04%	1.66%	-0.868	no
-19	0.69%	0.28%	0.06%	1.62%	0.730	no
-18	0.29%	-0.12%	0.04%	1.56%	0.305	no
-17	0.29%	-0.12%	0.02%	1.52%	0.303	no
-16	-0.11%	-0.52%	0.01%	1.50%	-0.114	no
-15	-0.11%	-0.52%	0.03%	1.49%	-0.114	no
-14	0.05%	-0.36%	0.06%	1.46%	0.052	no
-13	0.52%	0.11%	0.06%	1.41%	0.550	no
-12	-0.11%	-0.52%	0.05%	1.35%	-0.114	no
-11	0.44%	0.03%	0.05%	1.31%	0.463	no
-10	1.52%	1.11%	0.15%	1.26%	1.608	no
-9	0.81%	0.40%	0.13%	1.10%	0.854	no
-8	-1.32%	-1.73%	0.10%	0.97%	-1.392	no
-7	-0.87%	-1.28%	0.12%	0.87%	-0.923	no
-6	0.74%	0.33%	0.16%	0.75%	0.783	no
-5	0.35%	-0.06%	0.13%	0.59%	0.371	no
-4	0.04%	-0.37%	0.11%	0.47%	0.047	no
-3	-0.49%	-0.90%	0.08%	0.35%	-0.515	no

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-2	-1.25%	-1.66%	0.07%	0.27%	-1.324	no
-1	1.67%	1.26%	0.11%	0.20%	1.763	**yes**
0	-0.41%	-0.82%	0.09%	0.09%	-0.434	no
1	-1.25%	-1.66%	0.09%	0.19%	-1.320	no
2	-2.03%	-2.44%	0.14%	0.33%	-2.147	**yes**
3	1.15%	0.74%	0.21%	0.54%	1.213	no
4	-1.92%	-2.33%	0.18%	0.72%	-2.030	**yes**
5	2.92%	2.51%	0.26%	0.98%	3.090	**yes**
6	-0.72%	-1.13%	0.16%	1.13%	-0.761	no
7	0.28%	-0.13%	0.19%	1.33%	0.294	no
8	0.05%	-0.37%	0.19%	1.51%	0.049	no
9	0.28%	-0.14%	0.19%	1.71%	0.291	no
10	0.58%	0.17%	0.19%	1.89%	0.613	no
11	-0.11%	-0.52%	0.17%	2.07%	-0.114	no
12	0.04%	-0.37%	0.18%	2.25%	0.047	no
13	-0.41%	-0.82%	0.19%	2.44%	-0.434	no
14	-0.11%	-0.52%	0.23%	2.67%	-0.114	no
15	0.50%	0.09%	0.25%	2.91%	0.529	no
16	0.80%	0.39%	0.23%	3.14%	0.844	no
17	0.04%	-0.37%	0.19%	3.33%	0.044	no
18	0.19%	-0.22%	0.20%	3.54%	0.202	no
19	0.04%	-0.37%	0.20%	3.74%	0.044	no
20	3.69%	3.28%	0.22%	3.96%	3.896	**yes**
21	0.82%	0.41%	-0.10%	3.86%	0.871	no
22	-0.11%	-0.52%	-0.19%	3.67%	-0.114	no
23	-0.75%	-1.16%	-0.20%	3.46%	-0.789	no
24	0.18%	-0.23%	-0.13%	3.33%	0.188	no
25	-0.18%	-0.59%	-0.18%	3.15%	-0.189	no
26	-0.11%	-0.52%	-0.18%	2.98%	-0.114	no
27	-0.82%	-1.23%	-0.19%	2.79%	-0.867	no

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
28	-0.83%	-1.24%	-0.03%	2.75%	-0.873	no
29	-0.18%	-0.59%	0.23%	2.99%	-0.190	no
30	1.27%	0.86%	0.44%	3.42%	1.340	no

Table 7.5: Complete Research finding for the August 2016 Elections.

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-30	-0.85%	0.08%	-0.85%	-16.86%	-0.47	no
-29	-0.59%	0.34%	-0.72%	-16.01%	-0.33	no
-28	0.15%	1.08%	-0.43%	-15.29%	0.09	no
-27	-3.85%	-2.93%	-1.28%	-14.87%	-2.15	yes
-26	-4.60%	-3.68%	-1.95%	-13.58%	-2.57	yes
-25	-3.31%	-2.38%	-2.17%	-11.64%	-1.85	yes
-24	1.63%	2.56%	-1.63%	-9.46%	0.91	no
-23	3.69%	4.62%	-0.97%	-7.83%	2.06	yes
-22	1.16%	2.09%	-0.73%	-6.87%	0.65	no
-21	3.14%	4.07%	-0.34%	-6.14%	1.75	yes
-20	1.60%	2.53%	-0.17%	-5.80%	0.89	no
-19	-2.61%	-1.68%	-0.37%	-5.63%	-1.45	no
-18	-0.68%	0.25%	-0.39%	-5.26%	-0.38	no
-17	-0.83%	0.09%	-0.42%	-4.87%	-0.46	no
-16	-1.84%	-0.91%	-0.52%	-4.45%	-1.03	no
-15	-0.51%	0.42%	-0.52%	-3.93%	-0.28	no
-14	-1.74%	-0.81%	-0.59%	-3.41%	-0.97	no
-13	-2.61%	-1.69%	-0.70%	-2.82%	-1.46	no

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
-12	1.77%	2.69%	-0.57%	-2.12%	0.98	no
-11	1.90%	2.83%	-0.45%	-1.55%	1.06	no
-10	3.32%	4.25%	-0.27%	-1.10%	1.85	yes
-9	3.13%	4.05%	-0.11%	-0.83%	1.74	yes
-8	0.15%	1.08%	-0.10%	-0.71%	0.09	no
-7	0.89%	1.82%	-0.06%	-0.61%	0.49	no
-6	-0.72%	0.21%	-0.09%	-0.55%	-0.40	no
-5	-0.82%	0.10%	-0.12%	-0.46%	-0.46	no
-4	-0.83%	0.09%	-0.14%	-0.35%	-0.47	no
-3	-0.84%	0.08%	-0.17%	-0.20%	-0.47	no
-2	2.83%	3.76%	-0.06%	-0.03%	1.58	no
-1	1.87%	2.80%	0.00%	0.03%	1.04	no
0	0.93%	1.86%	0.03%	0.03%	0.52	no
1	0.59%	1.51%	0.08%	0.11%	0.33	no
2	0.63%	1.56%	0.12%	0.22%	0.35	no
3	0.15%	1.08%	0.12%	0.34%	0.09	no
4	-1.75%	-0.82%	0.18%	0.52%	-0.97	no
5	-2.27%	-1.34%	0.26%	0.78%	-1.26	no
6	-1.35%	-0.42%	0.32%	1.10%	-0.75	no
7	0.22%	1.15%	0.28%	1.38%	0.12	no
8	0.10%	1.03%	0.16%	1.54%	0.06	no
9	-0.20%	0.73%	0.12%	1.66%	-0.11	no
10	0.26%	1.18%	0.02%	1.68%	0.14	no
11	0.96%	1.89%	0.00%	1.68%	0.54	no
12	0.46%	1.38%	0.10%	1.78%	0.25	no
13	-3.94%	-3.01%	0.00%	1.78%	-2.20	yes
14	0.68%	1.60%	0.05%	1.83%	0.38	no

DAY	Abnormal Return (AR)	Cumulative Abnormal Return (CAR)	Average Abnormal Return (AAR)	Cumulative Average Abnormal Return (CAAR)	T-Test Stat	Significance
15	-0.78%	0.15%	0.08%	1.91%	-0.43	no
16	0.15%	1.08%	0.10%	2.01%	0.09	no
17	1.20%	2.13%	0.20%	2.20%	0.67	no
18	0.67%	1.60%	0.30%	2.51%	0.37	no
19	1.70%	2.63%	0.30%	2.81%	0.95	no
20	2.18%	3.11%	0.31%	3.11%	1.22	no
21	1.65%	2.57%	0.25%	3.37%	0.92	no
22	0.30%	1.23%	0.16%	3.53%	0.17	no
23	-0.82%	0.10%	0.13%	3.66%	-0.46	no
24	-0.78%	0.14%	0.08%	3.74%	-0.44	no
25	0.15%	1.08%	0.11%	3.85%	0.09	no
26	-0.89%	0.04%	0.10%	3.95%	-0.50	no
27	0.81%	1.74%	0.16%	4.11%	0.45	no
28	1.96%	2.88%	0.25%	4.36%	1.09	no
29	-0.93%	0.00%	0.13%	4.49%	-0.52	no
30	-1.04%	-0.11%	0.03%	4.52%	-0.58	no